

VLS3-AR0144-SL

- onsemi AR0144 1MP Global Shutter Sensor
- Captures high-speed dynamic targets clearly within an ultra-short exposure time.
- S-Mount for Interchangeable Lenses
- FAKRA Automotive Connector
- Plug & Play with Linux OS & Yocto
- Comes with VizionViewer™ Configuration Utility and VizionSDK



Specifications

Camera Information

CMOS Sensor	onsemi AR0144
Active Pixels	1280 (H) x 800 (V) = 1.0MP
Pixel Size	3.0 μm x 3.0 μm
Optical Format	1/4" (Diagonal 4.5 mm)
Shutter Type	Global Shutter
Chromaticity	Color
Illuminated type	Front Side Illuminated (FSI)
Maximum Frame Rate (UYVY)	1280 x 800 @ 60 fps 1280 x 720 @ 60 fps 640 x 480 @ 60 fps
Maximum S/N Ratio	38 dB
Output Format	UYVY

Camera Interface

Connector	FAKRA SMB Jack Z-Code
Serial Link	FPD-Link III

Power

Supply Voltage	12V $\pm$ 5%
Power Consumption	UYVY 1280 x 800 @ 60 fps $\leq$ 0.9W
Standby Power	$\leq$ 0.1W Standby



Software Support

Platform Support	x86 Intel / AMD NXP i.MX8M Mini / Plus NXP i.MX93 TI Sitara™ AM62x / AM62A TI Jacinto™ TDA4VM / TDA4VA / TDA4VH NVIDIA Jetson Nano NVIDIA Xavier NX NVIDIA Orin Nano/NX
Operation System	Linux Yocto
Software	VizionViewer™
Development SDK	VizionSDK

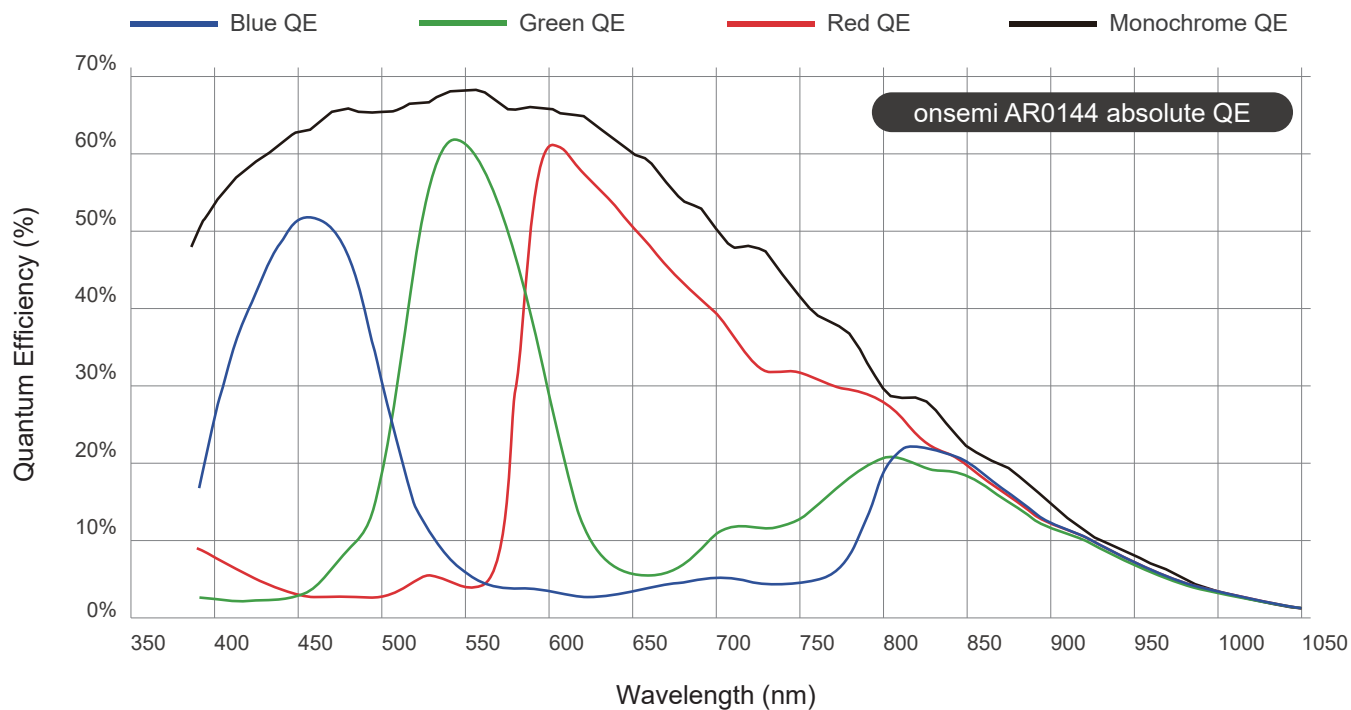
Environmental and Mechanical

Dimensions	29.5(W) x 29.5(H) x 32.2(D) mm
Weight	45 grams
Relative Humidity	10 to 90 %
MTBF	50,000 Hours
Shock	15G half-sine 11 ms duration
Operating Temperature	-30°C to +70°C
Vibration	1 Grms random 5-500Hz hr/axis

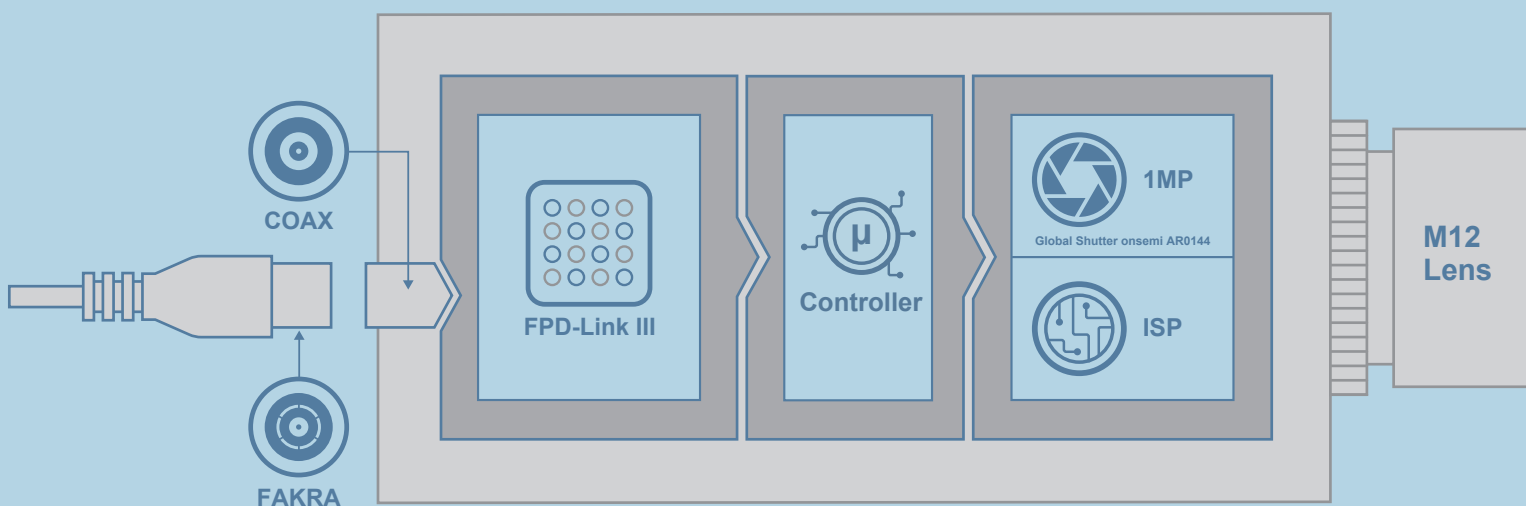
Certification and Compliance

Certification	Compliant with CE / FCC / RoHS / REACH directives
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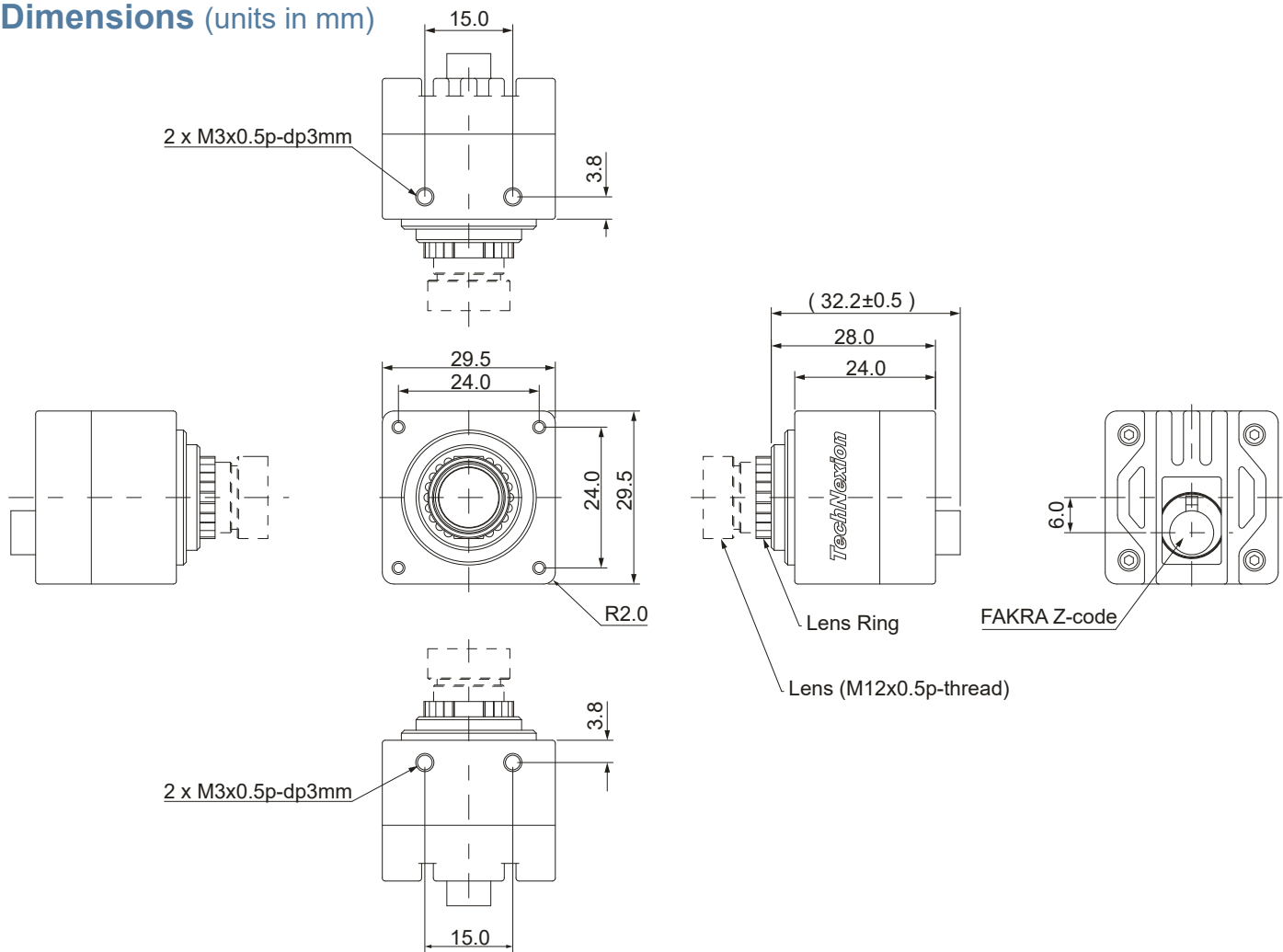
Spectral Characteristics



Block Diagram



Dimensions (units in mm)



Order Information

VLS3-AR0144-x-Sxx-xx

Part Number Rules

Option	Code	Description
Chromaticity	C	Color
Lens	S33	S-Mount Module D-FOV 33°
	S83	S-Mount Module D-FOV 83°
Filter	-	-
	IR	IR Cut Filter 650nm

For further customization or questions about orders, contact your TechNexion sales representative.

Optional Accessories

300-MOUNT-BRACKET

An easy to attach A-Mount bracket for TechNexion 30mm enclosed cameras.



300-MOUNT-BRACKET



300-MOUNT-BRACKET on tripod (tripod not included)

Lens Information

	 VLS3-AR0144-C-S33-IR	 VLS3-AR0144-C-S83-IR
Focus Type	Fixed Focus	Fixed Focus
Focal Length	8 mm	2.85 mm
Aperture	F1.8	F2.8
Lens D-FOV	34.0°	84.0°
Lens H-FOV	28.2°	75.0°
Lens V-FOV	17.5°	58.0°
Module D-FOV	33.1° ± 5%	82.6° ± 5%
Module H-FOV	28.0° ± 5%	73.5° ± 5%
Module V-FOV	17.4° ± 5%	50.3° ± 5%
TTL	25.22 mm	20 mm
BFL	6.92 mm	2.03 mm
MOD	0.2 m	0.3 m
Distortion	<-5.11%	< -0.35%
IR-Filter	650 nm	650 nm

FPD-Link III Frame Grabbers

Adding TechNexion FPD-Link III cameras to an existing x86 Intel or AMD based system couldn't be easier by using our full range frame grabber cards.

- Available in 1 / 2 / 4 / 8 port FPD-Link III camera frame grabber configuration
- Fits in a standard PCI Express Gen 3 slot
- Plug-n-Play driver-less UVC based solution
- Complete Fanless design with brushed aluminium thermal solution
- Comes with TechNexion VizionSDK



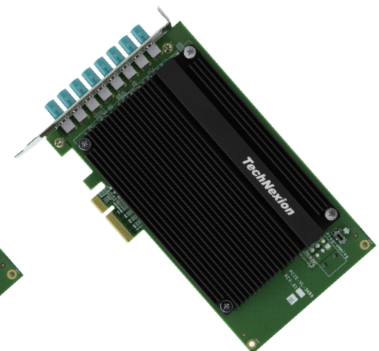
UVC-VL-3100



PCIE-VL-3120



PCIE-VL-3440



PCIE-VL-3480

Nvidia Orin Fanless AI Computing



- Nvidia Orin Nano / NX Systems
- Up-to 8 FPD-Link III cameras
- Nvidia Jetpack driver integration
- TechNexion VizionSDK

TRAQ-4VM Robotic AMR Solutions



- TI TDA4VM
- Up-to 8 FPD-Link III cameras
- FPD-Link III Display
- Single Pair Ethernet (SPE) sensor network extension
- Linux / Debian support
- TechNexion VizionSDK

i.MX8M Plus HMI Solutions



- NXP i.MX8M Plus
- Available as 15" / 15.6" / 21.5" Display solution
- Up-to 2 FPD-Link III cameras
- FPD-Link III remote Display
- Linux / Debian / Android support
- TechNexion VizionSDK

i.MX8M Plus Edge Computing



- NXP i.MX8M Plus
- Available with By-pass Ethernet solution
- Extensive low-speed I/O availability
 - GPIO / UART / CAN / USB
- Up-to 2 FPD-Link III cameras
- Linux / Debian / Android support
- TechNexion VizionSDK